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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/595,039 | 06/15/2000 | Oikwan Tsang | E0902 | 9154 |
| 7590 | 01/28/2004 | | EXAMINER | |
| Jonathan A Platt Renner Otto Boisselle & Sklar LLP 19th Floor 1621 Euclid Ave Cleveland, OH 44115 | | | LE, DIEU MINH T | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2114 | 5 |
| DATE MAILED: 01/28/2004 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|--|---|----------------------------------|
| Office Action Summary | Application No. 09/595,039 | Applicant(s) TSANG ET AL. |
| | Examiner Dieu-Minh Le | Art Unit 2114 |
| | -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address -- | |
| Period for Reply A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. | | |
| <ul style="list-style-type: none"> - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely. - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). - Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b). | | |
| Status | | |
| 1) <input checked="" type="checkbox"/> Responsive to communication(s) filed on <u>07 November 2003</u> . | | |
| 2a) <input type="checkbox"/> This action is FINAL . 2b) <input checked="" type="checkbox"/> This action is non-final. | | |
| 3) <input type="checkbox"/> Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213. | | |
| Disposition of Claims | | |
| 4) <input checked="" type="checkbox"/> Claim(s) _____ is/are pending in the application. | | |
| 4a) Of the above claim(s) _____ is/are withdrawn from consideration. | | |
| 5) <input type="checkbox"/> Claim(s) _____ is/are allowed. | | |
| 6) <input checked="" type="checkbox"/> Claim(s) <u>1-21</u> is/are rejected. | | |
| 7) <input type="checkbox"/> Claim(s) _____ is/are objected to. | | |
| 8) <input type="checkbox"/> Claim(s) _____ are subject to restriction and/or election requirement. | | |
| Application Papers | | |
| 9) <input type="checkbox"/> The specification is objected to by the Examiner. | | |
| 10) <input type="checkbox"/> The drawing(s) filed on _____ is/are: a) <input type="checkbox"/> accepted or b) <input type="checkbox"/> objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). | | |
| 11) <input type="checkbox"/> The proposed drawing correction filed on _____ is: a) <input type="checkbox"/> approved b) <input type="checkbox"/> disapproved by the Examiner. If approved, corrected drawings are required in reply to this Office action. | | |
| 12) <input type="checkbox"/> The oath or declaration is objected to by the Examiner. | | |
| Priority under 35 U.S.C. §§ 119 and 120 | | |
| 13) <input type="checkbox"/> Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) <input type="checkbox"/> All b) <input type="checkbox"/> Some * c) <input type="checkbox"/> None of: 1. <input type="checkbox"/> Certified copies of the priority documents have been received. 2. <input type="checkbox"/> Certified copies of the priority documents have been received in Application No. _____. 3. <input type="checkbox"/> Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. | | |
| 14) <input type="checkbox"/> Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application). a) <input type="checkbox"/> The translation of the foreign language provisional application has been received. | | |
| 15) <input type="checkbox"/> Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121. | | |
| Attachment(s) | | |
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | | |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | | |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. | | |
| 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. | | |
| 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) | | |
| 6) <input type="checkbox"/> Other: _____. | | |

DETAILED ACTION

1. This Office Action is in response to the communication filed 11/07/03 in application 09/595,039.
2. Claims 1-21 are again presented for examination.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1 are rejected under 35 U.S.C. § 102(b) as being anticipated over Lidinsky et al. (US Patent 4,897,874 hereafter referred to as Lidinsky).

As per claim 1:

Lidinsky explicitly teaches:

- A network medium interface (i.e., network interface modules, NIMs) [fig. 2-3, abstract, col. 3, lines 5-8] comprising:
 - first and second blocks [fig. 2-3, col. 6, lines 5-8];
 - an external interface [fig. 2-3, col. 6, lines 15-20];
 - a switchable connection [fig. 2-3, col. 6, lines 5-8], wherein the switchable connection may be selectively configured either to internally connect the blocks to each other [fig. 2-3, col. 3, lines 5-11 and col. 6, lines 5-8], or to connect one of the blocks to a transmit portion and/or a receive portion of the external interface [fig. 2-3, col. 6, lines 21-65].

This is clearly shown that Lidinsky's teaching capabilities are corresponding to Applicant's claim 1 invention.

5. Claims 1, 4-7, 10-16, 18-21 are rejected under 35 U.S.C. § 102(b) as being unpatentable Hutchison et al. (US Patent 5,838,989 hereafter referred to as Hutchison).

As per claim 1:

Hutchison explicitly teaches:

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- A network medium interface (i.e., network switchable medium) [fig. 6, abstract, col. 2, lines 37-40] comprising:
 - first and second blocks [fig. 3 and 6, col. 6, lines 1-9 and col. 10, lines 56];
 - an external interface [fig. 3 and 6, col. 6, lines 14-15 and col. 11, lines 13-16];
 - a switchable connection [fig. 3 and 6, col. 6, lines 14-15 and col. 11, lines 6-11], wherein the switchable connection may be selectively configured either to internally connect the blocks to each other [fig. 3 and 6, col. 3, lines 10-17 and col. 11, lines 19-22], or to connect one of the blocks to a transmit portion and/or a receive portion of the external interface [fig. 3 and 6, col. 6, lines 5-9 and col. 11, lines 13-17].

As per claims 4-5:

Hutchison explicitly teaches:

- A network medium interface (i.e., network switchable medium) [fig. 6, abstract, col. 2, lines 37-40] comprising:
 - blocks includes a physical layer device (PHY) [fig. 2, col. 5, lines 25-26] and a media access controller (MAC) [fig. 2, col. 1, lines 36-40 and col. 5 line 17];

As per claim 6:

Hutchison explicitly teaches:

- A network medium interface (i.e., network switchable medium) [fig. 6, abstract, col. 2, lines 37-40] comprising:
 - a switchable connection is a first switchable connection [fig. 3 and 6, col. 6, lines 14-15 and col. 11, lines 6-11], and further comprising a third block and a second switchable connection [fig. 3, lines 1-5] which may selectively configured either to internally connect the third block to the first block, or to connect either the first sub and/or the third sub to the transmit portion and/or the receive portion of the external interface [col. 6, lines 5-29].

As per claims 7 and 10-11:

Hutchison explicitly teaches:

- A network medium interface (i.e., network switchable medium) [fig. 6, abstract, col. 2, lines 37-40] comprising:
 - the first block includes a media access controller (MAC) [fig. 2, col. 1, lines 36-40 and col. 5 line 17];
 - the second block includes a physical layer device (PHY) [fig. 2, col. 5, lines 25-26];

- the first and second switches may be configured to test operation of the first block by connecting receive and transmit ends of to respective portions of the external interface [fig. 3, col. 6, lines 1-29].

As per claim 12:

Hutchison explicitly teaches:

- A method of testing operation of an internal block of a network medium interface [fig. 3 and 6, abstract, col. 2, lines 37-40 and col. 8, lines 44-47] comprising:
 - the reconfiguring the device [col. 6, lines 1-9 and col. 13, lines 6-8] so that a normally-internally-connected connections of the block are connected to an the external interface [fig. 2-3 and 6, col. 5, lines 39-45, col. 6, lines 43-57, and col. 12, lines 27-36];
 - input test signal to the block [col. 13, lines 26-33].
 - evaluating output of the block [col. 13, lines 40-43].

As per claims 13-16:

Hutchison explicitly teaches:

- A method of testing operation of an internal block of a network medium interface [fig. 3 and 6, abstract, col. 2, lines 37-40] comprising:

- the reconfiguring includes: [col. 6, lines 1-9];
 - connecting two normally-internally-connected connections of the block to the external interface [fig. 2-3 and 6, col. 5, lines 39-45, col. 6, lines 43-57, and col. 12, lines 27-36];
- one or more switchable connections operatively coupled to the block [fig. 3 and 6, col. 6, lines 1-9].
- sending signal to the one or more switchable connections [fig. 3, col. 6, lines 1-29] wherein the sending signal includes sending the signals through pins of the network medium interface [fig. 2, col. 5, lines 8-32].

As per claims 18-21:

Hutchison explicitly teaches:

- A network medium interface (i.e., network switchable medium) [fig. 6, abstract, col. 2, lines 37-40] comprising:
 - the block includes a media access controller (MAC) [fig. 2, col. 1, lines 36-40 and col. 5 line 17];
 - the block includes a physical layer device (PHY) [fig. 2, col. 5, lines 25-26];
 - the block includes a second external interface [fig. 3, col. 6, lines 1-29].

- the second external interface is a bus connector [fig. 3, col. 6, lines 1-29].

This is clearly shown that Hutchison's teaching capabilities are corresponding to Applicant's invention.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 2-3, 8-9, and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable Hutchison et al. (US Patent 5,838,989 hereafter referred to as Hutchison) in view of Jeng (US Patent 5,892,768).

As per claims 2-3:

Hutchison explicitly teaches:

- A network medium interface (i.e., network switchable medium) [fig. 6, abstract, col. 2, lines 37-40] comprising:
- data transmitting and receiving to and from internal and external interfaces [fig. 3 and 6, col. 6, lines 10-17 and col. 12, lines 13-20].

Hutchison does not explicitly teach:

- a media independent interface (MII) wherein MII transmitted and received data in four-bit wide data stream.

However, Hutchison does disclose capability of:

- A switchable interface having any of a variety of communication media [abstract, fig. 3 and 6, col. 1, lines 18-23] comprising:
- a media independent module, a physical signaling module (PLS), a media access control module (MAC), a logical link control module (LLC), and a media attachment unit (MAU) [col. 1, lines 36-40];
- a physical medium attachment (PMA) and a medium dependent interface (MDI) [col. 5, lines 25-26].

In addition, Jeng explicitly teaches:

- 10/100 Base Ethernet to T1/E1 HDSL converter method [abstract, fig. 2, col. 1, lines 5-10]; comprising:
 - Ethernet media independent interface (MII) [fig. 2, col. 2, lines 41-46];
 - transmitting 4 bit MII via data interface [col. 10, lines 36-37];

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to realize the combination of Hutchison's network medium interface and Jeng's 10/100 base Ethernet do teach the Applicant's media independent interface (MII) wherein MII transmitted and received data in four-bit wide data stream. This is because the MII is the Ethernet interface. In addition, Hutchison and Jeng do clearly deal with Ethernet interfaces by allowing data to transmit and receive among communication devices as desired.

This modification would have been obvious because a person having ordinary skill in the art would have been motivated to do so to provide the network interface environment and more specifically to a network switchable interfaces with a mechanism to enhance data performance, data availability/reliability, and data exchanging operation. This in term will improve data flexibility in the configuration/reconfiguration of network interface ports. It is further obvious because by utilizing this approach, the network medium interface via internal and external connections can be realized in high performance throughput with a high reliability and flexibility environment.

As per claims 8-9:

Hutchison explicitly teaches:

- A network medium interface (i.e., network switchable medium) [fig. 6, abstract, col. 2, lines 37-40] comprising:
- data transmitting and receiving to and from internal and external interfaces [fig. 3 and 6, col. 6, lines 10-17 and col. 12, lines 13-20].

Hutchison does not explicitly teach:

- bus interface is a peripheral component interconnect (PCI) interface.

However, Hutchison does disclose capability of:

- A switchable interface having any of a variety of communication media [abstract, fig. 3 and 6, col. 1, lines 18-23] comprising:
- IEEE standard interfaces among media modules, access module, signaling module, etc... [col. 1, lines 36-40];

In addition, Jeng explicitly teaches:

- 10/100 Base Ethernet to T1/E1 HDSL converter method [abstract, fig. 2, col. 1, lines 5-10]; comprising:
- Ethernet MAC and PCI bus interface [fig. 2, col. 6, lines 19-20].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to realize the combination of Hutchison's network medium interface and Jeng's 10/100 base Ethernet do teach the Applicant's bus interface is a peripheral component interconnect (PCI) interface. This is because the IEEE standard interface does include the bus interface which is the peripheral component interconnect (PCI) interface. In addition, Hutchison and Jeng do clearly apply PCI bus interfaces in allowing data to transmit and receive among communication devices as desired.

This modification would have been obvious because a person having ordinary skill in the art would have been motivated to do so to provide the network interface environment and more specifically to the data bus interfaces with a mechanism to enhance data performance, data availability/reliability, and data exchanging operation.

As per claim 17:

Hutchison explicitly teaches:

- A network medium interface (i.e., network switchable medium) [fig. 6, abstract, col. 2, lines 37-40] comprising:

- data transmitting and receiving to and from internal and external interfaces [fig. 3 and 6, col. 6, lines 10-17 and col. 12, lines 13-20].

Hutchison does not explicitly teach:

- the external interface is a media independent interface (MII).

However, Hutchison does disclose capability of:

- A switchable interface having any of a variety of communication media [abstract, fig. 3 and 6, col. 1, lines 18-23] comprising:
- a media independent module, a physical signaling module (PLS), a media access control module (MAC), a logical link control module (LLC), and a media attachment unit (MAU) [col. 1, lines 36-40];
- a physical medium attachment (PMA) and a medium dependent interface (MDI) [col. 5, lines 25-26].

In addition, Jeng explicitly teaches:

- 10/100 Base Ethernet to T1/E1 HDSL converter method [abstract, fig. 2, col. 1, lines 5-10]; comprising:

- Ethernet media independent interface (MII) [fig. 2, col. 2, lines 41-46];
 - transmitting 4 bit MII via data interface [col. 10, lines 36-37];

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to realize the combination of Hutchison's network medium interface and Jeng's 10/100 base Ethernet do teach the Applicant's media independent interface (MII) wherein MII transmitted and received data in four-bit wide data stream. This is because the MII is the Ethernet interface. In addition, Hutchison and Jeng do clearly deal with Ethernet interfaces by allowing data to transmit and receive among communication devices as desired for the same reasons set forth as described in claim 2, **supra**.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. A shortened statutory period for response to this action is set to expire THREE (3) months, ZERO days from the date of this

letter. Failure to respond within the period for response will cause the application to be abandoned. 35 U.S.C. 133.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dieu-Minh Le whose telephone number is (703) 305-9408. The examiner can normally be reached on Monday-Thursday from 6:30 AM to 4:00 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel, can be reached on (703) 305-9713. The fax phone number for this Group is (703) 746-7240.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9306, (for formal communications
intended for entry)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).



DIEU-MINH THAI LE
PRIMARY EXAMINER
ART UNIT 2114